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(56) Documents Cited

GB 2280743 A

GB 2249383 A

GB 2197063 A

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(54) Cooking gas burner

(57) Cooking apparatus having one or more top burners each comprising a burner head seated upon a gas supply spigot also has at least one top burner head that is suitable for cooking non-British style meals. One form of the one burner suitable for heating foodstuff in a wok comprises an assembly with a first burner head 18 having burner ports arranged in a circle. The first head is surrounded by a second burner head 19 also having burner ports arranged in a circle. Gas supply passages 20, 21 lead radially from the burner head and are adapted to seat on the spigots. Another form of burner head is of elongate form with a series of burner ports (28) (Fig. 2) adjacent one end of the head and a second series of burner ports (29) adjacent the other end of the head, the two series being separated from one another by a partition (30) disposed internally of the head. This latter form of head is suitable for heating foodstuffs in a fish kettle.

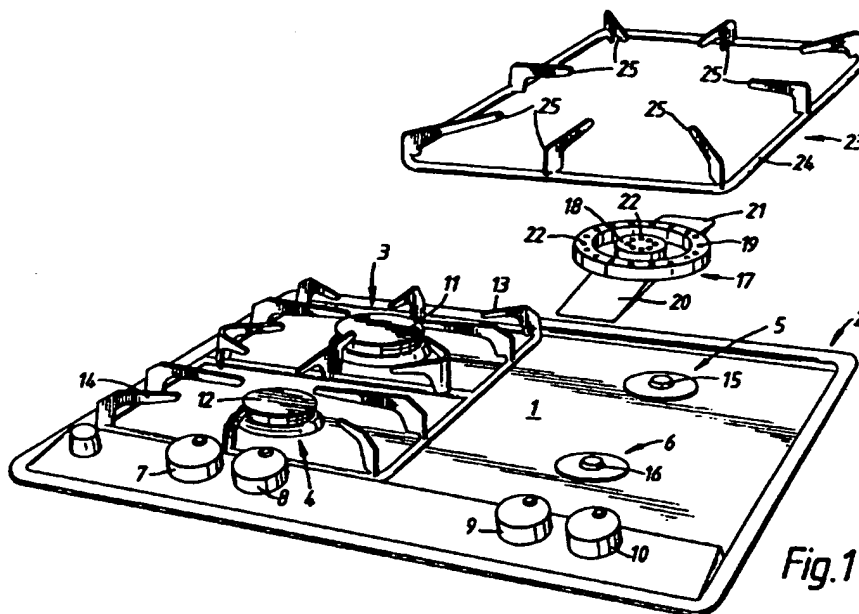
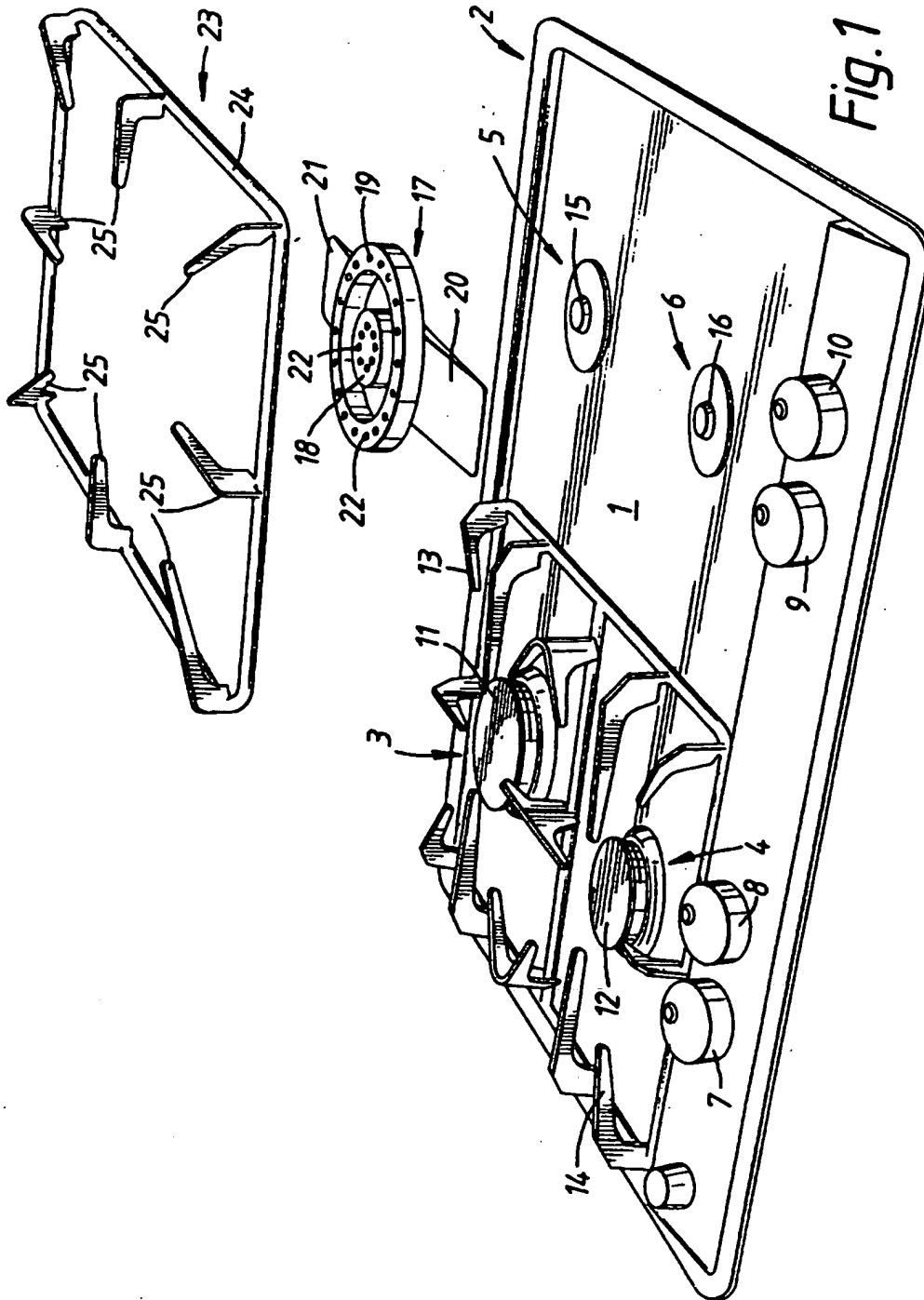


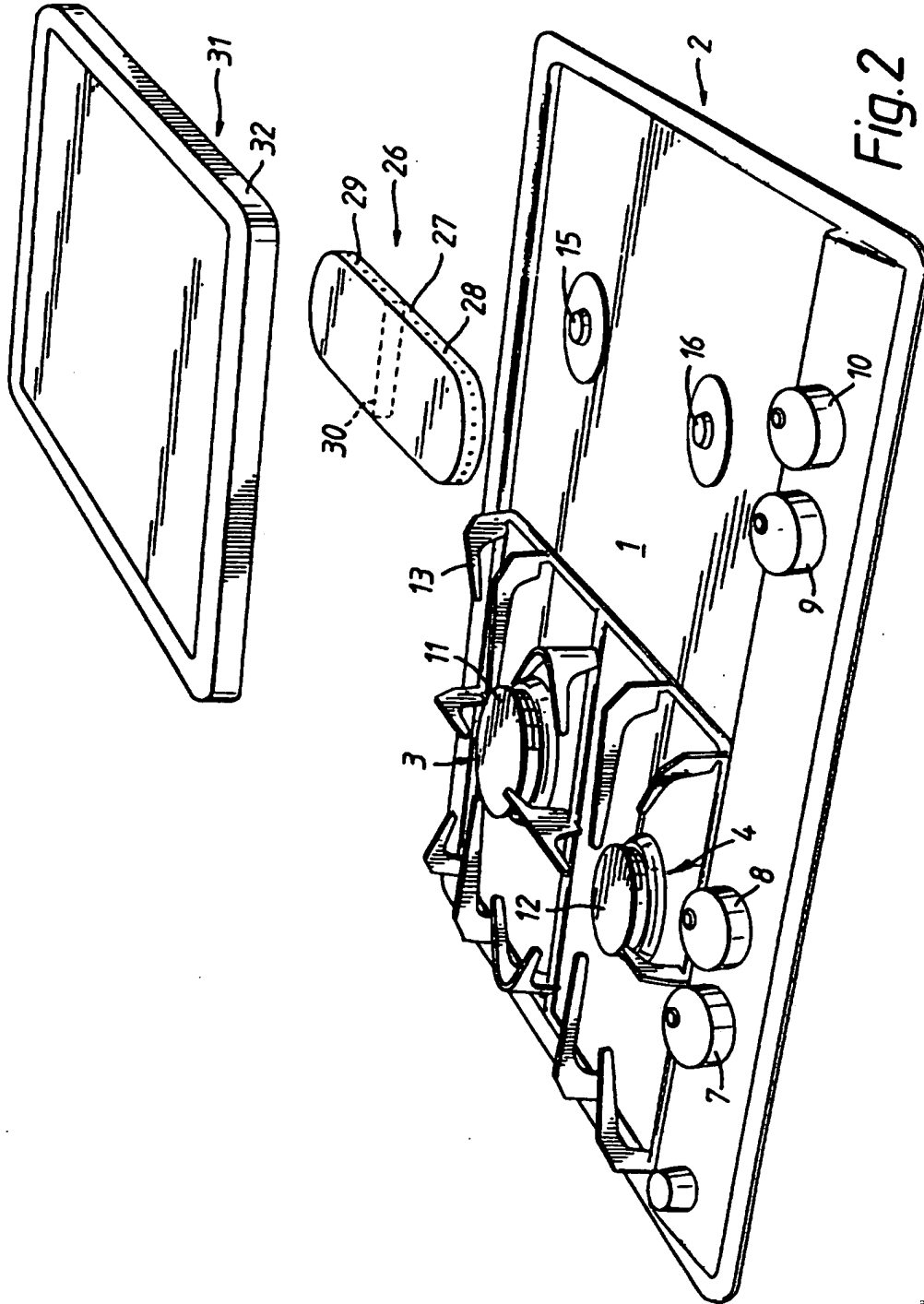
Fig.1

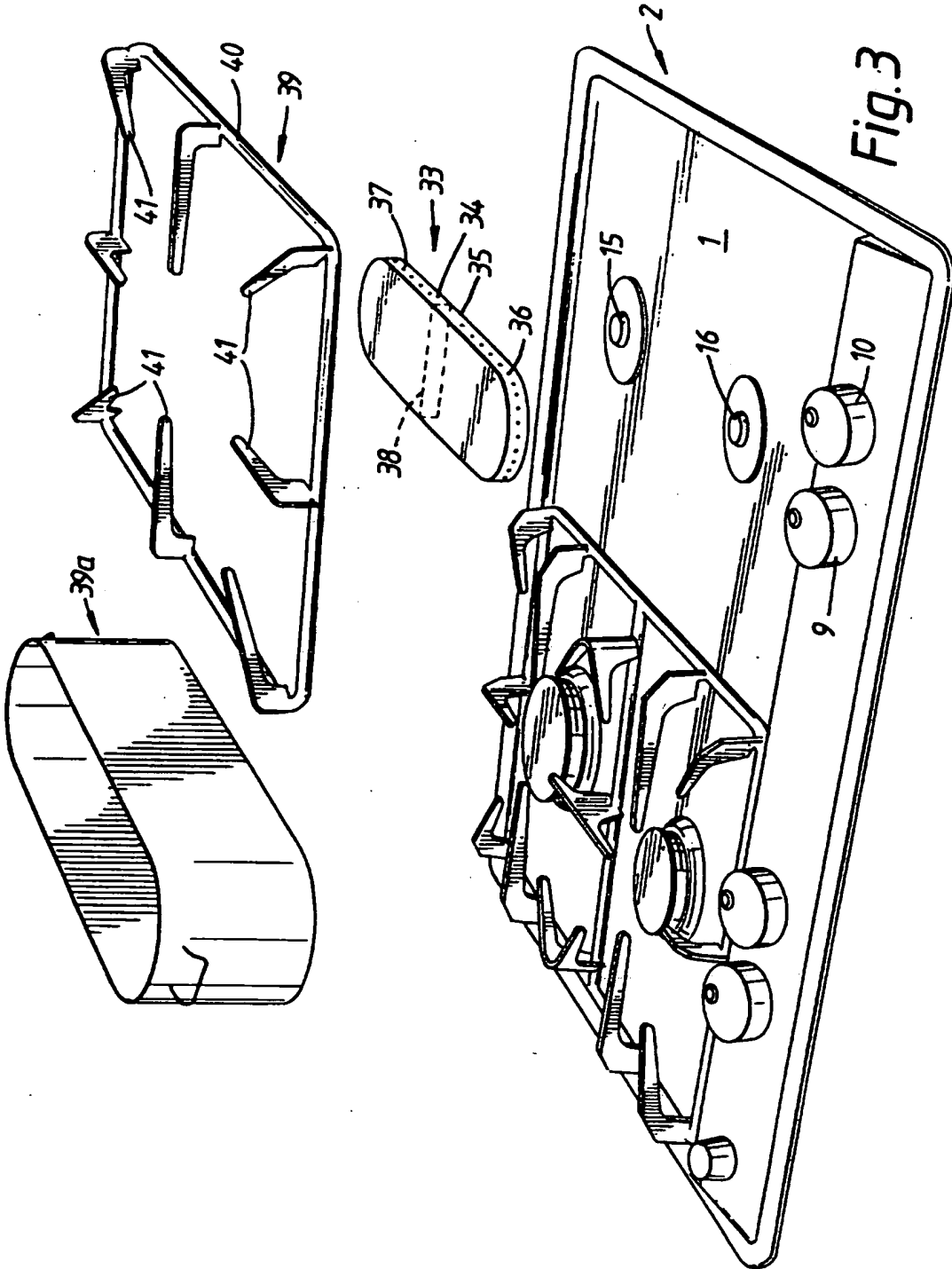
At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995

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IMPROVEMENTS IN AND RELATING TO COOKING APPARATUS

This invention relates to cooking apparatus and has particular reference to gas-fired cookers and hobs.

5 Cooking apparatus sold on the UK market is designed to provide cooking facilities suitable for the preparation of meals traditionally enjoyed by the majority of British families. Such apparatus usually has several top burners that are designed to be used to heat saucepans and similar containers.

10 With an increasing interest being shown in the home preparation of meals that are traditional to other cultures and ethnic groups it is found that the conventional cooker or hob does not allow the successful preparation of such meals.

15 Accordingly, it is an object of the present invention to provide cooking apparatus that can be used for the preparation of meals enjoyed by other cultures and ethnic groups.

20 According to the present invention cooking apparatus having one or more top burners is provided with one or more alternative forms of top burner head that facilitate the preparation of non-British style meals and is or are used in place of the conventional form of top burner head when the preparation of such
25 meals is desired.

30 The alternative forms of top burner head will vary with the kind of meals to be prepared. For example, the preparation of meals requiring the use of a wok will use a large burner head possibly with inner and outer rings of flame ports, whilst the preparation of meals requiring the use of a griddle or Japanese plate will use an elongate burner head that may be capable of providing a heat gradient along its length when desired.

35 The preparation of some meals requires the use of a fish kettle and, in this case, an elongate burner head

will be used.

When an alternative form of burner head is used, it may be advantageous to use a special form of pan support.

By way of example, only a number of alternative forms of burner head embodying the invention will now be described in greater detail with reference to the accompanying drawings of which:

Fig. 1 is a schematic perspective view of a cooker top with a burner head and pan support suitable for use with a wok or rice burner,

Fig. 2 is a view similar to that of Fig. 1 but with a burner head and pan support suitable for use with a griddle or Japanese plate, and ,

Fig. 3 is also a view similar to that of Fig. 1 but with a burner head and pan support suitable for use with a fish kettle.

Fig. 1 shows the upper surface 1 of a gas-fired hob 2 having provision for four top burners 3, 4, 5 and 6 with respective gas flow control taps 7....10.

Burners 3 and 4 are shown with their burner heads 11 and 12 in place and with conventional pan supports 13 and 14 in position on the surface 1.

Burners 5 and 6 have had their burner heads lifted off to reveal the usual gas supply spigots 15 and 16 on which the burner heads rest when in position.

Fig. 1 shows a burner head 17 comprising an inner head 18 of generally cylindrical shape surrounded by an outer annular head 19 that is spaced from the inner head 18. A gas supply passage 20 extends radially from head 18 whilst a second gas supply passage 21 extends radially from head 19 in a direction opposite to passage 20. The passages 20 and 21 are sized to allow their open ends to seat over and be supported by the spigots 16 and 15 respectively. The open ends also have internal gas seals (not shown) to enable them to be sealed in a gas-tight manner to the spigots. The heads 18 and 19 are

both formed with flame ports 22.

To support the wok during use, a special pan support 23 is provided. The support has an outer frame 24 of generally rectangular shape from which extend inwardly projecting short arms 25 whose inner ends are spaced to allow the wok to be securely seated on them. The support is sized to seat on the hob surface 1 in place of the conventional pan supports.

In use, the wok, having been loaded with food to be heated, is placed centrally on the support 23 and one or both of the control taps 9, 10 is or are turned on to supply gas to the head 17. If a low heat is needed, the inner head 18 only may be used, the heat emitted therefrom being regulated by tap 9. If a greater heat is needed then head 19 may be used, the heat emitted therefrom being regulated by tap 10. If still greater heat is required then both burner heads will be brought into use by turning on both taps 9 and 10.

It will be appreciated that the construction just described provides heat where it is most effective i.e. at the centre of the bottom of the wok and also supports the wok safely during use.

Fig. 2 also shows the hob 2 with burners 3 and 4 in position and the remaining burner heads removed to allow the use of a burner head 26 of elongate shape that is suitable for heating a griddle or a Japanese plate. Head 26 has rounded ends and a downwardly-extending peripheral flange 27. The flange 27 has a series of flame ports that are arranged in two groups 28, 29, one adjacent each end of the head. The two groups of ports are separated from one another by an internal partition shown in Fig. 2 by the dotted line 30.

The ends of the head 26 have internal seals (not shown) to enable them to seat in gas-tight fashion on the spigots 15, 16.

Head 26 is used with a support consisting of a rectangular open frame 31 with a flange 32 extending

downwardly around its outer edge that enables the frame to seat correctly on the surface 1 of the hob 2 with the upper surface thereof spaced from the hob surface.

To use the head 26, it is placed over the spigots 15, 16 with the internal seals engaged therewith and the support 31 is located in position on the surface and the griddle located centrally on the support.

By appropriate use of the taps 9, 10 the heat emitted by head 28 can readily be regulated. If a low heat is required, then one or other of the taps may be used to produce flames at one end or the other of the head 28. If both taps are turned on flames are produced at both ends of the head 28, the total heat emitted being adjusted by means of the taps. If desired a heat gradient can be produced along the griddle by appropriate adjustment of the taps.

The use of an elongate head as just described enables the user to select which part of a griddle or Japanese plate placed centrally on support 31 is to be heated and this gives greater control and flexibility over the cooking process.

Fig. 3 also shows the hob 2 with spigots 15 and 16 exposed to receive an alternative burner head 33 of generally elongate shape but somewhat longer than head 26 shown in Fig. 2. The length of the head 33 is just less than that of a conventional fish kettle 34. The head 33 has a downwardly-extending peripheral flange 34 that has sets 36, 37 of flame ports located one adjacent each end of the head 33. The sets are separated by an internal partition indicated in Fig. 3 by the dotted line 38. The ends of the head 33 also have internal seals (not shown) to enable the ends to seat in a gas-tight fashion on the spigots 15 and 16.

A support for the fish kettle is shown at 39. It comprises a generally rectangular frame 40 with a series of inwardly projecting short arms 41 on which the kettle rests when being heated.

The head 33 is used in a manner similar to head 28 shown in Fig.2. The taps 9, 10 are used to bring the ports at one end or the other of the head into use or to bring both sets of ports into use if desired.

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Again, the use of the head 33 allows a greater control over the area of the base of the fish kettle to be heated and over the total heat input from the head 33.

CLAIMS.

1. Cooking apparatus having one or more top burners each comprising a burner head seated upon a spigot and provided with at least one top burner head that is suitable for cooking non-British style meals.

2. Cooking apparatus as claimed in claim 1 in which the one top burner head comprises a first burner head with a series of burner ports arranged in the form of a circle that is located within a second burner head also having a series of burner port arranged in the form of a circle.

3. Cooking apparatus as claimed in claim 2 in which the circle are concentric.

4. Cooking apparatus as claimed in claim 2 or 3 in which the first burner head has a gas supply passage extending radially therefrom, and adapted to seat on a first gas supply spigot, the second burner head also having a gas supply passage that is separate from that of the first head and which extends radially from the second head and adapted to seat on a second spigot.

5. Cooking apparatus as claimed in claim 1 in which the one top burner head is of an elongate shape with a peripheral flange apertured to form a first group of burner ports adjacent one end of the head and a second group of burner ports adjacent the other end of the head, the groups being separated from one another by a partition disposed internally of the head and in which one end of the head is adapted to seat on a first spigot, the other end being adapted to seat on a second spigot.

6. Cooking apparatus as claimed in any one of claims 2 3 or 4 and further comprising a pan support adapted to be seated on the top surface of the cooking apparatus and having an outer frame from which extends a series of inwardly projecting short arms whose ends are separated by a distance that allows a wok-type cooking vessel to

be supported thereby.

7. Cooking apparatus as claimed in claim 6 in which the burner head is of a length sufficient for the head to accommodate a fish kettle.

5 8. Cooking apparatus as claimed in any one of claims 5, 6 or 7 and further comprising a pan support comprising a frame sized to seat on the surface of the cooking apparatus and having a downwardly extending peripheral flange on which the support rests.

10 9. A top burner head assembly for cooking apparatus as claimed in claim 1 and comprising a first burner head with a series of burner ports arranged in a circle and located within a second burner head also having a series
15 burner ports arranged in a circle, the first and second heads each having a gas supply passage adapted to seat on a spigot.

10 10. A top burner assembly for cooking apparatus as claimed in claim 1 and comprising a burner head of elongate form and with a peripheral flange apertured to provide a first group of burner ports adjacent one end
20 of the head and a second group of burner ports adjacent the other end of the burner head, the groups being separated from one another by a partition disposed internally of the head, the ends of the head being
25 adapted to seat on spigots.

11. An assembly as claimed in claim 9 in which the first and second burner heads each have a gas supply passage extending radially from it, the passages being adapted to seat upon first and second spigots.

30 12. Cooking apparatus substantially as herein described with reference to and as illustrated by Fig. 1 or Fig. 2 or Fig. 3 of the accompanying drawings.

Patents Act 1977

**Examiner's report to the Comptroller under Section 17
(The Search report)**

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Relevant Technical Fields

Search Examiner
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(ii) Int Cl (Ed.6) F23D 14/04, 14/06, 14/08, 14/10

Date of completion of Search
11 OCTOBER 1995

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant following a search in respect of Claims :-
4, 6, 7, 9, 11, 12

(ii)

Categories of documents

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| <p>X: Document indicating lack of novelty or of inventive step.</p> <p>Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.</p> <p>A: Document indicating technological background and/or state of the art.</p> | <p>P: Document published on or after the declared priority date but before the filing date of the present application.</p> <p>E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.</p> <p>&: Member of the same patent family; corresponding document.</p> |
|--|---|

Category	Identity of document and relevant passages		Relevant to claim(s)
X,E	GB 2280743 A	(TRI SQUARE) 8 February 1995 see page 5, line 16 to page 7, line 10; Figure 2	9
X	GB 2249383 A	(THE UNION GAS) see page 5, lines 9 to 20; Figure 1	4, 9
X	GB 2197063 A	(CHIN-SHIN CHANG) see page 1, line 90 to page 2, line 28; Figure 1	4, 9
X	GB 0189853 A	(R GOEHDE) Figure 1	4, 9

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).

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ABSTRACT:

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